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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/652,118	08/28/2003	Hiroyuki Yumoto	Q190-US1	1839

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EXAMINER

WEINER, LAURA S

ART UNIT PAPER NUMBER

1745

DATE MAILED: 12/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/652,118

Applicant(s)

YUMOTO ET AL.

Examiner

Laura S Weiner

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 1-04; 5-04; 2-2-04; 2-04
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. Claim 5 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 5 is rejected because it is unclear how the massive ball-shaped graphite particles, the carbon fibers and graphite flakes can each have the same average particle size of 10-35 um. It is unclear what is the difference between graphite particles and graphite flakes if they both have the same particle size.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-36 are rejected under 35 U.S.C. 102(e) as being anticipated by Nagata et al. (US 2004/0043293).

Nagata et al. teaches on page 3, [0034-0036], a negative electrode comprising a mixture of shapes of carbon particles comprising 0-80% spheres, 0-80% carbon fibers and 0-30% graphite flakes; 0-30% CMC binder and 0-30% SBR binder and water are

mixed together to form a slurry which is applied to a titanium foil substrate. Nagata et al. teaches on page 4, claims 13-25, a battery comprising an hermetically sealed case, a negative electrode, a lithium metal oxide positive electrode and a separator.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 5-8, 14, 18-21, 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ozaki et al. (6,294,291).

Ozaki et al. teaches a secondary battery comprising a cathode comprising composite oxides containing lithium and an anode comprising composite carbon materials containing graphite spherical particles and carbon fibers. The carbon fiber improves the stiffness of the anode depolarization mix to prevent the body made thereof from swelling and decomposing. Ozaki et al. teaches in column 3, lines 25-30 that the carbon fiber content is preferably from 5-20 wt% on the basis of the graphite weight. Ozaki et al. teaches in column 4, lines 31-50, that the cathode comprises LiCoO_2 , acetylene black, graphite and a fluorocarbon resin binder and then suspended in a carboxymethyl cellulose aqueous solution to form a paste. The anode comprises meso-carbon microbeads (MCMB) and vapor grown carbon fiber, fluorocarbon resin and the anode composition is suspended in a carboxymethyl cellulose aqueous solution

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to form a paste. In column 4, lines 9-10, explains that Figure 3 shows photographs of graphite materials comprising spherical particles.

Ozaki et al. discloses the claimed invention as explained above except for specifically teaching that there are graphite particles and graphite flakes present as well as carbon fibers.

As shown in Figures 3A and 3B, there are many different size graphite materials present. Therefore one could expect graphite particles and graphite flakes to be present. Figure 3B shows very large graphite particles down to very small graphite particles which could be considered flakes.

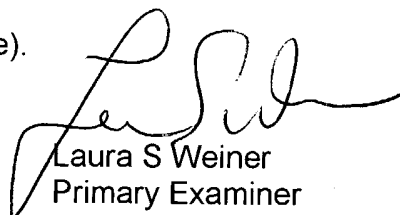
It would have been obvious to one having ordinary skill in the art at the time the invention was made to use graphite particles as well as graphite flakes because both can be present because graphite comes in different forms.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura S Weiner whose telephone number is 571-272-1294. The examiner can normally be reached on M-F (6:30-4:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Laura S Weiner
Primary Examiner
Art Unit 1745

December 13, 2004